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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,727	11/10/2003	Warren M. Farnworth	2269-5558F US	4992
24247	7590	06/16/2006	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			KASENGE, CHARLES R	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,727	Applicant(s) FARNWORTH, WARREN M.	
	Examiner Charles R. Kasenge	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/10/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed 3/30/06, with respect to the rejection(s) of claim(s) 1-44 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Adachi U.S. Patent 6,281,470.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi et al. U.S. Patent 6,962,289. Referring to claims 1, 2, 21, and 22, Adachi discloses a programmable material consolidation apparatus, comprising: a support element (Fig. 3, 51); a selective material consolidation system configured to form an object on at least one of the support element and a substrate positioned on the support element (col. 12, lines 23-25 and Fig. 3); a machine vision system oriented to view the support element and an object under fabrication, the machine vision system including a field of vision which is at least substantially coextensive with a field of exposure of the selective material consolidation system (col. 12, lines 38-46 and Fig. 3, 55-56); and at least one control element in communication with the selective material consolidation system and the machine vision system (col. 12, lines 33-57 and Fig. 3, 52). Adachi discloses the programmable material consolidation apparatus of claim 1, wherein the machine vision system

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includes a locationally stationary camera positioned to avoid interference with the selective material consolidation system (Fig. 3, 56).

Referring to claims 3-7, 21-23, and 25-28, Adachi discloses the programmable material consolidation apparatus of claim 2, wherein the locationally stationary camera comprises a charge-coupled device (Fig. 3, 56). Adachi discloses the programmable material consolidation apparatus of claim 2, further comprising: a magnification element associated with the locationally stationary camera to magnify an image viewed thereby (col. 12, lines 38-46). Adachi discloses the programmable material consolidation apparatus of claim 4, wherein the magnification element optically (col. 12, lines 38-46) or digitally magnifies the image (col. 12, lines 38-46). Adachi discloses the programmable material consolidation apparatus of claim 2, wherein the machine vision system further includes a rotational element associated with the locationally stationary camera to facilitate orientation of the locationally stationary camera to a selected location of the field of exposure (col. 15, lines 17-21).

Referring to claims 8-11 and 31-35, Adachi discloses the programmable material consolidation apparatus of claim 1, wherein the machine vision system includes: a scan element (col. 12, lines 35-37); and a camera configured to view a portion of the field of exposure and carried by the scan element, the scan element being configured to move the camera to a plurality of locations over the field of exposure (col. 26, lines 26-37). Adachi discloses the programmable material consolidation apparatus of claim 8, wherein the scan element positions the camera proximate to a location in which selective material consolidation is to be effected (col. 15, lines 17-21). Adachi implicitly discloses the programmable material consolidation apparatus of claim 9, wherein the camera has an image resolution of about 0.0001 inch (col. 12, lines 38-46).

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Adachi discloses the programmable material consolidation apparatus of claim 8, wherein the camera comprises a charge-coupled device or a complementary metal-oxide-semiconductor device (Fig. 3, 56).

Referring to claims 12-17 and 39-44, Adachi discloses the programmable material consolidation apparatus of claim 8, wherein the scan element includes: an x-axis element; and a y-axis element oriented substantially perpendicular to the x-axis element (col. 11, lines 57-67 and col. 15, lines 55-65). Adachi discloses the programmable material consolidation apparatus of claim 12, wherein the camera is positioned at a location where the x-axis element and the y-axis element intersect one another (col. 15, lines 55-65). Adachi discloses the programmable material consolidation apparatus of claim 12, further comprising an actuator associated with each of the x-axis element and the y-axis element (col. 15, lines 17-33). Adachi discloses the programmable material consolidation apparatus of claim 14, wherein each actuator is configured to move its associated x-axis element or y-axis element incrementally (col. 15, lines 55-65). Adachi discloses the programmable material consolidation apparatus of claim 14, wherein each actuator is configured to move its associated x-axis element or y-axis element substantially continuously (col. 15, lines 17-33). Adachi discloses the programmable material consolidation apparatus of claim 14, wherein operation of each actuator occurs under control of the at least one control element (col. 12, lines 33-57).

Referring to claims 18-20, 24, 29, 30, 32, and 36-38, Adachi discloses the programmable material consolidation apparatus of claim 8, wherein the at least one control element receives signals from the camera indicating locations of features on or over the support element (col. 12, lines 23-37). Adachi discloses the programmable material consolidation apparatus of claim 18,

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wherein the at least one control element is configured to cause the selective material consolidation system to effect fabrication of one or more objects at a precise location on at least one of the support element and a substrate thereon based on a location of at least one feature viewed by the machine vision system (col. 12, lines 23-37). Adachi discloses the programmable material consolidation apparatus of claim 1, further comprising: at least one fiducial mark associated with the support element for providing a reference point for the machine vision system (col. 13, lines 61-64).

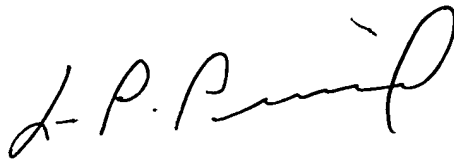
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R. Kasenge whose telephone number is 571 272-3743. The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "L. P. Picard", with a stylized flourish at the end.

CK
June 10, 2006

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**